

## (Notes and Queries.)

[Received 20th December, 1865.]

*Camp, near Myanoung, November 22nd, 1865.*

During a visit to Calcutta a few months ago, Mr. Grote drew my attention to a sort of controversy which had been started at home, touching the habit, which fireflies were stated to exhibit occasionally, of a concurrent exhibition of their light, by vast multitudes acting in unison; a statement which appeared to have been somewhat sceptically received. Mr. Grote does not appear to have ever witnessed this phenomenon in Bengal, and questioned me if I had ever observed any confirmatory instance. Fireflies are tolerably well known, of course, to the resident in Bengal, but I had never there observed any such habit among the countless fireflies, which form such fiery-like ornaments to the shrubberies about Calcutta. In Pegu, however, I have witnessed the exhibition in question; myriads of fireflies emitting their light, and again relapsing into darkness, in the most perfect rhythmic unison. I much regret, that I did not secure specimens, but the circumstances were as follows. I had halted my boat for the night, alongside a small clearing in the low lying tract of country, forming part of the Irawadi estuary (Delta), east of the Bassein river, where the water was salt, and the entire country not more than a foot, if so much, above the flood level. Night had closed in, and my servant, who brought in the tea, asked me to step out of my tent and see the fireflies which, he said, he had never seen the like of before. On stepping out of the tent, a truly beautiful sight presented itself. In front was the broad and deep river sweeping on, *ρῶτι ἐοικὸς*, with its indistinctly seen background of primæval forest on its opposite bank. Around me was the recently-formed clearing, with its two or three huts and my own camp, as the sole proof of man's occupancy, for miles and miles, but, for all the wildness and almost desolation of the scene, the bank on which I stood was a glorious spectacle, and those acquainted with the class of native servants will well understand that it must have been at once unusual and beautiful indeed to rivet the attention of a listless *khitmutgar*!

The bushes overhanging the water were one mass of fireflies, though, from the confined space available for them on low shrubs, the

numbers may not have been actually more than are often congregated in Bengal. The light of this great body of insects was given out as I have said, in rhythmic flashes, and, for a second or two, lighted up the bushes in a beautiful manner; heightened, no doubt, by the sudden relapse into darkness which followed each flash. These are the facts of the case (and I may add, it was towards the end of the year), and the only suggestion I would throw out, to account for the unusual method of luminous emanation, is, that the close congregation of large numbers of insects, from the small space afforded them by the bushes in question, may have given rise to the synchronous emission of the flash, by the force of imitation or *sympathy*.

Mr. Montgomery, of the Survey Department here, also fully corroborates the habit of our Pegu fireflies simultaneously emitting their light, but adds, he has only remarked it under conditions similar to those described above, in low swampy ground. It still remains, therefore, to be decided if the insect is different from the ordinary one, or if, as I am inclined to think, the simultaneity is produced by sympathy and great crowding of individuals.

Whilst my pen is in my hand, I would add a few words on the address of Dr. J. E. Gray to the Zoological Section of the British Association, printed at page 75 of the Notices and Abstracts appended to the Report of the Association for 1864.

The excellent remarks on the aim and arrangement of Public Museums will, it is to be hoped, not escape the attention of those interested in our own Calcutta Museum, and the especial stress he lays on the exclusion of light from collections on spirits, is what I urgently brought to the notice of the Society but a short time since. It is not, however, to this portion of Dr. Gray's address that I would now refer, but to the statement at page 82 that, "*the natives of India and of the islands of the Malayan Archipelago have brought into a semi-domesticated state various species of wild cattle, such as the Gyal, the Gour, and the Banteng.*"

Of the first of these, the Gyal, we know that such is the case, but I should much like to know in what part of India or Malaynesia the *Gour* or the *Banteng* are "semi-domesticated," certainly, the feat has never been performed by any "*native of India,*" of whose geography and powers incurably lax notions appear to be stereotyped in England,

from the ablest downwards. I would enquire, therefore, through the pages of this Journal, to what instances Dr. Gray can allude, as the fact is certainly novel to those in India. The Governor of Rangoon, at the time of the last war, I am told, had a pair of Gour sufficiently tame to be yoked in a cart, but this is quite insufficient to establish their claim to be viewed as semi-domesticated. In India, the difficulty of rearing the calves is notorious.

Again, immediately before the passage I have quoted above, Dr. Gray remarks, "In the lower and warmer region of Central and Southern Asia, the Zebra has been completely domesticated."

In the passage, Dr. Gray is alluding to wild species brought by man into a state of domestication, and I confess to some curiosity as to the wild stock of the domesticated Zebra. There is, I fancy, some little confusion, however, in Dr. Gray's ideas here, as, on the previous page, he tells us, "the oxen" "are never found *truly wild*."

The distinction, too, which Dr. Gray draws (*loc. cit.*) between the "*truly domesticated*" animals, the ox, the sheep, the horse, the camel, the dog and the cat, and the "*semi-domesticated*," as the buffalo, the goat, the pig, the rabbit, the reindeer, the yak &c., appears forced and to a great extent imaginary.

The distinction between these two classes of animals is more due to the efforts of the *Breeder* than to *mere domestication*, and I should have thought, that the highest triumphs of some of our rabbit fancies and of our breeds of pigs merited quite as much as our "sheep" to be considered as "*truly domesticated*," if thereby is intended an unnatural deviation from the wild stock, solely produced by the art of the Breeder.

I cannot enter at greater length on this most interesting question, but I hope that some of the readers of this Journal who have perused Dr. Gray's report, will be able to furnish some explanation of the points indicated above.

Another query I would ask is, to what *race* of *Calotes mystaceus* can Gunther refer to, when he states that "an old male measures nearly 24 inches, the tail taking 19 inches?" Now *Calotes mystaceus* is common in *Birma*, and more than a score have passed through my hands, but no specimen that I ever saw attained to even 12 inches of total length!

Are not two races or species here united, a smaller one from Birma, and a larger one from Camboja or elsewhere south?

The type in the Paris Museum, Gunther says, is "not full grown," but it was from Birma, and is probably the size of ordinary Birinese specimens.

W. THEOBALD, JR.

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